

We claim:

1. An add-on component service subscription method comprising:
providing a device model agent (DMA) including a service manager, the DMA and service manager being in communication with a device for which the DMA provides at least one service;
checking in with a services host to see if new transactions are waiting for the device;
and
if a new transaction awaits the device, notifying a device user.
2. The method of claim 1 wherein checking in occurs on a periodic basis.
3. The method of claim 1 wherein a user can initiate checking in.
4. The method of claim 1 further comprising providing user selection elements including an acceptance element.
5. The method of claim 4 further comprising, in response to user selection of the acceptance element, creating an acceptance transaction to send to the services host.
6. The method of claim 1 further comprising providing a user interface (UI) including an upgrade status screen.
7. The method of claim 5 wherein the new transaction is a new software transaction and the method further comprises receiving the accepted new software, installing the accepted new software, and rebooting the system hosting the accepted new software.
8. The method of claim 7 further comprising saving software that is being upgraded.

9. The method of claim 1 wherein checking in comprises encrypting communications.

10. A service provision method comprising:

providing at least one core service;

providing a DMA including a service manager;

providing a services layer in which services can run; and

providing a communications medium which the service manager can use to communicate with a services host.

11. The method of claim 10 wherein providing at least one core service comprises providing at least one diagnostic routine.

12. The method of claim 10 wherein providing at least one core service comprises providing an automatic billing service.

13. The method of claim 12 wherein the automatic billing service is a subscribed service that reports at least one billing meter to the services host.

14. The method of claim 10 wherein providing at least one core service comprises providing a supplies replenishment service.

15. The method of claim 14 wherein the supplies replenishment service is a subscribed service that tracks at least one of toner usage, area coverage, and toner bottle change events to ensure timely and accurate delivery of supplies to the user.

16. The method of claim 10 wherein providing at least one core service comprises providing a remote monitoring service.

17. The method or claim 16 wherein the remote monitoring service is a subscribed service that periodically performs a method comprising gathering a configurable set of data, modeling the data, and sending the data to the services host for monitoring.

18. The method of claim 17 wherein the set of data comprises at least one of billing meters, IOT faults, media path jams, image area coverage, characteristics of media used, feature usage, toner status, simplex/duplex quantities, media tray usage, reduction and enlargement, copy modes, and High-Frequency Service Items status.

19. The method of claim 10 wherein the at least one set of core services comprises at least one maintenance service.

20. The method of claim 19 wherein the at least one maintenance service comprises a DMA housekeeping service.

21. The method of claim 19 wherein the at least one maintenance service comprises a device health monitor service.

22. The method of claim 19 wherein the at least one maintenance service comprises a DMA to IOT communication status monitor service.

23. The method of claim 19 wherein the at least one maintenance service comprises a services synchronization service that periodically checks back with a services host to see if there are new instructions or activities the DMA should be doing.

24. The method of claim 10 further comprising providing a transaction log accessible to a user for inspection of messages sent from the device.

25. In a device centric services system comprising a device model agent in which at least one service runs to provide features for a device, device model agent comprising a service manager that collects transactions from the device to send to a services provider and that retrieves transactions from the services provider, an access privileges and transaction authorization scheme comprising:

- an Audit and Log Access level of authorization;
- a Simple Notification level of authorization; and
- an Approval Before Sending level of authorization.

26. The scheme of claim 25 wherein the Audit and Log Access level allows the service manager to complete transactions without per transaction authorization, record the transactions in a log, and present the log to a user upon demand.

27. The scheme of claim 25 wherein the Simple Notification level allows the service manager to complete transactions without per transaction authorization, record the transactions in a log, and present the log to a user upon demand, the service manager further sending a message to a user notifying the user of each transaction completion.

28. The scheme of claim 25 wherein the Approval Before Sending level allows the service manager to notify a user when a transaction is waiting to be sent, present the user with a transaction review interface, and present the user with a choice to approve or cancel the transaction, the service manager further recording the transactions in a log, and presenting the log to a user upon demand.

29. The scheme of claim 25 wherein the scheme has a default level of authorization, the scheme further allowing a user to reconfigure authorization level.

30. The scheme of claim 29 wherein the default level of authorization is Audit and Log Access.

31. The scheme of claim 25 wherein at least one user role is preconfigured.

32. The scheme of claim 31 wherein the at least one user role includes at least a Technical Key Operator, a Customer Service Engineer, and a System Administrator.

33. The scheme of claim 31 wherein a user role can be customized.